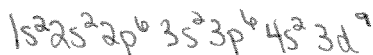


75. Write longhand and shorthand electron configurations for:

a. lithium



b. copper



c. sulfur

**LESSON 25 & 26: Classifying Substances and Bonding**

76. What type of bonding exists between:

a. metals

metallic

b. nonmetals

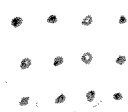
network covalent or molecular covalent

c. metals with nonmetals

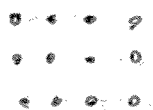
ionic

77. Describe the location of electrons in each type of bonding. Sketch a picture to describe each.

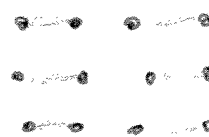
**Metallic:**  
electrons freely moving through whole substance



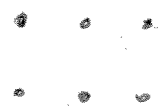
**Network Covalent:**  
e<sup>-</sup> pairs bonding in all directions around atom; shared e<sup>-</sup>



**Molecular Covalent:**  
e<sup>-</sup> pairs shared in clusters



**Ionic:**  
e<sup>-</sup> transferred from metal to nonmetal



78. Use bonding to explain why a network covalent solid will not dissolve while a molecular covalent solid will dissolve.

**Network:** Atoms too tightly bound together by the bonded pairs in all directions so H<sub>2</sub>O can't break up atoms. **Molecular:** Bonded in clusters so H<sub>2</sub>O can break them up

**LESSON 27: Electroplating Metals**

79. What is the purpose(s) of electroplating?

1) coat one metal w/another

2) separate a metal from a compound

80. Describe how the electroplating process works.

- Compound containing metal is dissolved in H<sub>2</sub>O
- Cations and anions separate when dissolved
- Metal strips like nickel are placed in the solution and connected to an electricity source like a battery
- Electricity (flow of e<sup>-</sup>) gives e<sup>-</sup> to metal cation, making metal neutral and collects on the nickel strip